Welcome to the Fourth Annual Consortium for Computing Sciences in Colleges Southwest Regional Conference

Loyola Marymount University, Los Angeles, California

April 1-2, 2011

Friday, 1 April 2011

Registration 1:30-2:00 p.m.
The Hill, Malone 460

Welcome 2:00-2:30 p.m.
Dr. Richard Plumb, Dean, Seaver College of Science and Engineering
Dr. Stephanie E. August, CCSC:SW Conference Chair, Loyola Marymount University

Keynote Presentation 2:30-3:30 p.m.

Dr. L. Jean Camp, Indiana University Bloomington
Computer Security and, versus, or Security Informatics

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<thead>
<tr>
<th>Paper Session 1: Non-majors</th>
<th>Tutorial 1</th>
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<tr>
<td>Session Chair Jim Blythe</td>
<td>Session Chair Tzu-Yi Chen</td>
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<td>The Hill, Malone 460</td>
<td>Foley Green Room</td>
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3:30 p.m.
Using Human-Centered Design to Expose Humans to Computer Science
Megan Thomas, CSU Stanislaus

4:00 p.m.
La Bella Figura: Making a Good Impression When Teaching an Introduction to Programming to Non-engineers
Ani Nahapetian, UCLA

4:30 p.m.
Pixels as Polymers: Unifying Introductory Biology and Computer Science through Visual Computation
Zachary Dodds, Eliot Bush, Ran Libeskind-Hadas, Harvey Mudd College

How to Organize a Professional Development Workshop for High School CS Teachers

Joanne McGrath Cohoon*†
Lecia Barker*
James P. Cohoon*†

*National Center for Women & Information Technology
†University of Virginia

Break 5:00-5:15 p.m.
Vendor Display
The Hill, Malone 460
Friday, 1 April 2011

<table>
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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>5:15 p.m.</td>
<td><strong>Face-To-Face Experiences for Online Students: Effective, Efficient, and</strong>&lt;br&gt;<strong>Engaging Hybrid Classes</strong>&lt;br&gt;Esmail Bonadkarian, Todd Whittaker&lt;br&gt;Franklin University</td>
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<tr>
<td>5:45 p.m.</td>
<td><strong>Semantic Information System</strong>&lt;br&gt;JohnPaul Adigwu, Aleksandr Milshteyn, Adrienne Lam, CSULA</td>
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<td>6:15 p.m.</td>
<td><strong>Touchcasting Digital Lecture Notes</strong>&lt;br&gt;James Dean Palmer, Northern Arizona University</td>
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Tutorial 2

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<td>5:15 p.m.</td>
<td><strong>Recruiting Women into Your Computing Major</strong>&lt;br&gt;Joanne McGrath Cohoon*†&lt;br&gt;Lecia Barker*º&lt;br&gt;†University of Virginia&lt;br&gt;ºUniversity of Texas at Austin</td>
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Break 6:45-7:00 p.m.

Dinner 7:00-8:30 p.m.<br>The Hill, Malone 460

CCSC Regional Meeting (All are welcome)<br>Nomination for Regional Representative and Region Chair<br>Candidates Statements

Adjourn 8:30 p.m.

Saturday, 2 April 2011

Registration 8:00 – 9:00 a.m.<br>Pereira 120 Lobby

Breakfast 8:00 – 9:00 a.m.<br>Pereira 120 Lobby
### Welcome 9:00 – 9:15 a.m.
**Keynote Presentation** 9:15 – 10:15 a.m.
Pereira 120

*Scott Easley,* University of Southern California Gamepipe Program

### Break 10:15 – 10:30 a.m.
Pereira 120 Lobby

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<tr>
<th>Paper Session 3: Course Design and Assessment</th>
<th>Tutorial 3</th>
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<td><strong>Session Chair Peter Gabrovsky</strong> Pereira 120</td>
<td><strong>Session Chair Kim Kihlstrom</strong> Pereira 121</td>
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<tr>
<td>10:30 a.m.</td>
<td>Software Engineering Course Design for Undergraduates</td>
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<td>Jianchao Han, CSU Dominguez Hills</td>
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<td>11:00 a.m.</td>
<td>Developing Students' Self-Assessment Skills Using Lab-Centric Instruction</td>
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<td>Colleen M. Lewis, Michael Clancy, Nathaniel Titterton, UC Berkeley</td>
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<td>11:30 a.m.</td>
<td>Learning Objective Based Design of a Computer Simulation Course</td>
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<td>Michael Doherty, University of the Pacific</td>
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<td>11:30 a.m.</td>
<td>Short Mobile Game Development Projects for CS1/2</td>
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<td>Stan Kurkovsky, Central Connecticut State University</td>
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<td>Delvin Defoe, Rose-Hulman Institute of Technology</td>
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### Lunch noon – 1:00 p.m.
Pereira 120 Lobby

### Vendor Exhibits

### Student Poster Session

### Keynote Presentation 1:00 – 2:00 p.m.
Pereira 120 Lobby

*Sven Koenig,* University of Southern California and National Science Foundation
### Paper Session 4: Gender and Math
Session Chair: Ani Nahapetian
Pereira 120

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<tr>
<th>Time</th>
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<tr>
<td>2:30 p.m.</td>
<td>Leveraging Existing Outreach Programs to Reach Underrepresented Minorities</td>
<td>Tzu-Yi Chen, Sara Owsley Sood, Lucy Vasserman, Maribel Gonzalez, Pomona College</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>Working Together: Words and Math</td>
<td>Allison Neyer, Stephanie E. August, Michele Hammers, Loyola Marymount University</td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td>Original Historical Sources in Data Structures and Algorithms Courses</td>
<td>Inna Pivkina, New Mexico State University</td>
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<td>4:00 p.m.</td>
<td>Sets Early and Probability</td>
<td>John Motil, CSU Northridge</td>
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### Tutorial 4
Session Chair: Mike Doherty
Pereira 121

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<tr>
<td></td>
<td>Peer Instruction</td>
<td>John Glick, University of San Diego</td>
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<td>Leo Porter, University of California, San Diego</td>
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<td>Beth Simon, University of California, San Diego</td>
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<td>Daniel Zingaro, University of Toronto</td>
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<td>4:40 – 5:40 p.m.</td>
<td>An (AP) CS Principles Pilot: A Course for All College-bound Students</td>
<td>Beth Simon, University of California, San Diego</td>
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### Keynote Presentation
4:40 – 5:40 p.m.
Pereira 120 Lobby

**Scott Grissom**, Program Director, National Science Foundation

*NSF Funding Opportunities for CS Faculty and Tips for Submitting Grant Proposals*

### Closing Remarks
5:40 – 5:50 p.m.
Abstracts

Keynote Presentations

Friday, 1 April 2011

2:30 - 3:30 p.m.
The Hill, Malone 460
Dr. L. Jean Camp, Indiana University Bloomington
Computer Security and, versus, or Security Informatics

Economic and technical trends have created the need for specialists in computer security. Rather than requiring the creation of ever more narrow programs of study, security informatics offers a different path. Unlike traditional computer security programs in computer science departments, this program focuses on a holistic view of security by looking at technical, user, and organizational aspects. Computer science programs have traditionally focused only on the technical aspects of security, which is at least partially responsible for the failure to address successfully some of the more social types of online attacks, such as phishing (a form of Internet scam that allows thieves access to the victim’s accounts). For example, security mechanisms which can be used to preemptively find and stop phishing attacks exist in most browsers, but because these technologies are difficult to engage, few people are aware of their existence. Even fewer are able to effectively use these technologies. Similarly many technical security measures now fail in large part due to the lack of consideration given to the human, organizational, and economic dimensions in security design. Security Informatics provides a more encompassing perspective on security. Security Informatics can be combined with other areas, as shown by Indiana’s use of concentrations in the local Security Informatics program, to leverage institutional strength in psychology, economics, health care, or regional studies. Also, by focusing on areas where women and men of color are not as under-represented as in computer science, security informatics can create an opportunity for recruitment in populations that might not consider a more traditional degree.

Saturday, 2 April 2011

9:15 – 10:15 a.m.
Pereira 120
Scott Easley, University of Southern California Gamepipe Program
Building an Academic Video Game Pipeline

Starting up a video game program at a major University has to take into account several crucial factors: Corralling hundreds of students with no previous experience, integrating disparate classes, the constant need to create thousands of 3d assets, and ultimately how to track the production of all student games. Within two semesters, Scott Easley helped to create the Gamepipe Program at the University of Southern California's Viterbi school of Engineering -- which in 2010 was ranked as the #1 video game design program by The Princeton Review.
Saturday, 2 April 2011

1:00 – 2:00 p.m.
Pereira 120

**Sven Koenig, University of Southern California and National Science Foundation**

*Computer Science Curricula*

Sven Koenig will discuss some of his ideas related to computer science curricula and, in this context, raise questions such as: Do computer science students need to know statistics? Can we teach concepts from computer science with games? Should students who are interested in artificial intelligence consider taking classes in operations research? What should we teach undergraduate students about research and research ethics?

4:40 – 5:40 p.m.
Pereira 120

**Scott Grissom, Program Director, National Science Foundation**

*NSF Funding Opportunities for CS Faculty and Tips for Submitting Grant Proposals*

National Science Foundation (NSF) programs are quite competitive but there are simple strategies that investigators should be aware of to improve their chances of success. This session describes some education-related programs in the EHR and CISE directorates, highlights programs in the NSF of particular interest to computer science educators, and enables participants to interact with the presenter concerning specific project ideas that could be appropriate for the various programs. Topics include a description of program goals, guidelines, review process as well as strategies for writing competitive proposals. Dr. Grissom is an NSF Program Officer in the Division of Undergraduate Education and has a wealth of experience working with NSF-funded principle investigators.
Tutorials

Friday, 1 April 2011

3:30 - 5:00 p.m.
Foley Green Room

*How to Organize a Professional Development Workshop for High School CS Teachers*

Joanne McGrath Cohoon*†
Lecia Barker*
James P. Cohoon*†

*National Center for Women & Information Technology
†University of Virginia

5:15 - 6:45 p.m.
Foley Green Room

*Recruiting Women into Your Computing Major*

Joanne McGrath Cohoon*†
Lecia Barker*º

*National Center for Women & Information Technology
†University of Virginia
ºUniversity of Texas at Austin

Saturday, 2 April 2011

10:30 a.m. - noon
Pereira 121

*Short Mobile Game Development Projects for CS1/2*

Stan Kurkovsky, Central Connecticut State University
Delvin Defoe, Rose-Hulman Institute of Technology

2:30 - 4:00 p.m.
Pereira 121

*Peer Instruction*

John Glick, University of San Diego
Leo Porter, University of California, San Diego
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